

DLOC Precursor IC 5.3: Practice Exercise #6

Directions: Choose the lettered answer that best completes the question. There is only one correct answer for each question unless indicated otherwise.

1. Match the given characteristics with the correct VCP. There may be more than one answer for each VCP.

VCP 11 _____ VCP 12 _____ VCP 21 _____

VCP 31 _____ VCP 32 _____ VCP 121 _____

- a. Part of the Convective group of VCPs
- b. Part of the Shallow Precipitation group of VCPs
- c. Part of the Clear Air group of VCPs
- d. Part of the Multiple PRF Dealiasing Algorithm (MPDA) group of VCPs
- e. Transmits short pulses
- f. Transmits long pulses
- g. Uses more than one CD rotation at the same elevation angle
- h. The Doppler PRFs are editable

2. Which VCP produces the greatest statistical accuracy of the base data?

- a. VCP 11
- b. VCP 12
- c. VCP 21
- d. VCP 31
- e. VCP 32
- f. VCP 121

3. Match the given characteristics with the correct WSR-88D waveform. There may be more than one answer for each waveform.

Batch (B) _____

Contiguous Doppler X (CDX) _____

Contiguous Surveillance (CS) _____

Contiguous Doppler (CD) _____

Split Cut (CS/CD) _____

- a. Produces the best quality velocity information at the expense of a short R_{\max} .
- b. Produces the best quality returned power and range information at the expense of a low V_{\max} .
- c. Transmits a high PRF for the entire 360° sweep.
- d. Transmits a low PRF for the entire 360° sweep.
- e. Used for multiple rotations at the same elevation angle to support the MPDA (VCP 121).
- f. Transmits at a low PRF and then switches to a high PRF for each 1° wide sweep.
- g. Transmits at a high PRF to collect both target reflectivity and velocity data on higher elevation slices.
- h. Employed at lower elevation angles where multiple trip echoes are most likely to occur.

4. Consider the characteristics of VCP 21 when the WSR-88D is scanning in Batch (B) mode at 6.0° elevation. To collect surveillance data, PRF# _____ is used and _____ pulses per radial are transmitted.

- a. 1, 28
- b. 2, 8
- c. 3, 12
- d. 5, 70

5. Consider the characteristics of VCP 32 when the WSR-88D is scanning in Contiguous Doppler (CD) mode at 1.5° . The default PRF # is _____ and _____ pulses per radial are transmitted.

- a. 5, 220
- b. 6, 238
- c. 7, 256
- d. 8, 278

6. If a WSR-88D is operating in VCP 32, using Delta PRI table #3, and is collecting velocity data at 1.5° elevation, then _____ pulses would be transmitted per radial and Vmax would be approximately _____ kt for the default values.

- a. 220, 79
- b. 1013.51, 79
- c. 220, 48.7
- d. 1013.51, 48.7

7. Your WSR-88D radar is operating in VCP 11 and scanning with an elevation angle that uses the CDX waveform. A thunderstorm located at a range of 95 nm with a top of 65,000 ft will

- a. not be range folded.
- b. be range folded (i.e., "second trip echo).
- c. be detected but placed at the proper range.
- d. not be detected at this elevation angle.